

ABSTRACT OF THE DISCLOSURE

A start-up method for a fuel cell system that includes a fuel cell that carries out power generation by the electrochemical reaction between a fuel gas and the oxygen gas in the air; a fuel gas discharge path and a fuel gas supply path that are connected to the fuel cell; a fuel gas circulation path in which the fuel gas discharge path merges with the fuel gas supply path; and a purge valve provided on the fuel gas circulation path in order to discharge the circulating fuel gas from the fuel gas circulation path. The method includes the steps of opening the purge valve at the same time that the fuel gas is supplied to the fuel cell and replacing the nitrogen gas that originates in the air and is present in the fuel gas circulation path by fuel gas; and closing the purge valve after the nitrogen gas in the fuel gas circulation path has been replaced by the fuel gas.